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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,799	11/30/2001	Eric J. Kauffman	59589.000033	2672
21967	7590	08/29/2005	EXAMINER	
HUNTON & WILLIAMS LLP INTELLECTUAL PROPERTY DEPARTMENT 1900 K STREET, N.W. SUITE 1200 WASHINGTON, DC 20006-1109			ASSOUAD, PATRICK J	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 08/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,799

Applicant(s)

KAUFFMAN ET AL.

Examiner

Patrick J. Assouad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,9-22,25-27,29 and 30 is/are rejected.
- 7) ☒ Claim(s) 3-8,23,24 and 28 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/28/02, 4/17/02, 5/1/02, 11/20/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 9-20, 21-22, 25, 26, 27, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frantz et al. (US 2002/0193969 A1) filed 6/15/01 in view of Keyes et al. (US 2003/0041135 A1) filed 8/21/01.

3. Frantz et al. disclose a system and method for monitoring gas turbine plants. More particularly, they disclose:

A web-based system monitors a plurality of different gas turbine plants and includes a server system that summarizes data from a plurality of plants. The system also includes a client system including a browser and a storage device for storing information. The server system is configured to be coupled to the client system and retrieves operational data from the plurality of gas turbine plants, stores the data in the centralized database, and generates graphical representations of the operational data based on the stored data. More specifically, operational data from a plurality of turbine plants is summarized and viewable remotely with the server system. (Abstract)

4. As per independent claim 1, 21, 26, 27, 29 and 30, and dependent claims 2, 9-11, 15-16, 22, and 25, Frantz et al. substantially disclose the instant claimed invention. Fig. 3 of Frantz et al. is reproduced below for ease in understanding this rejection.

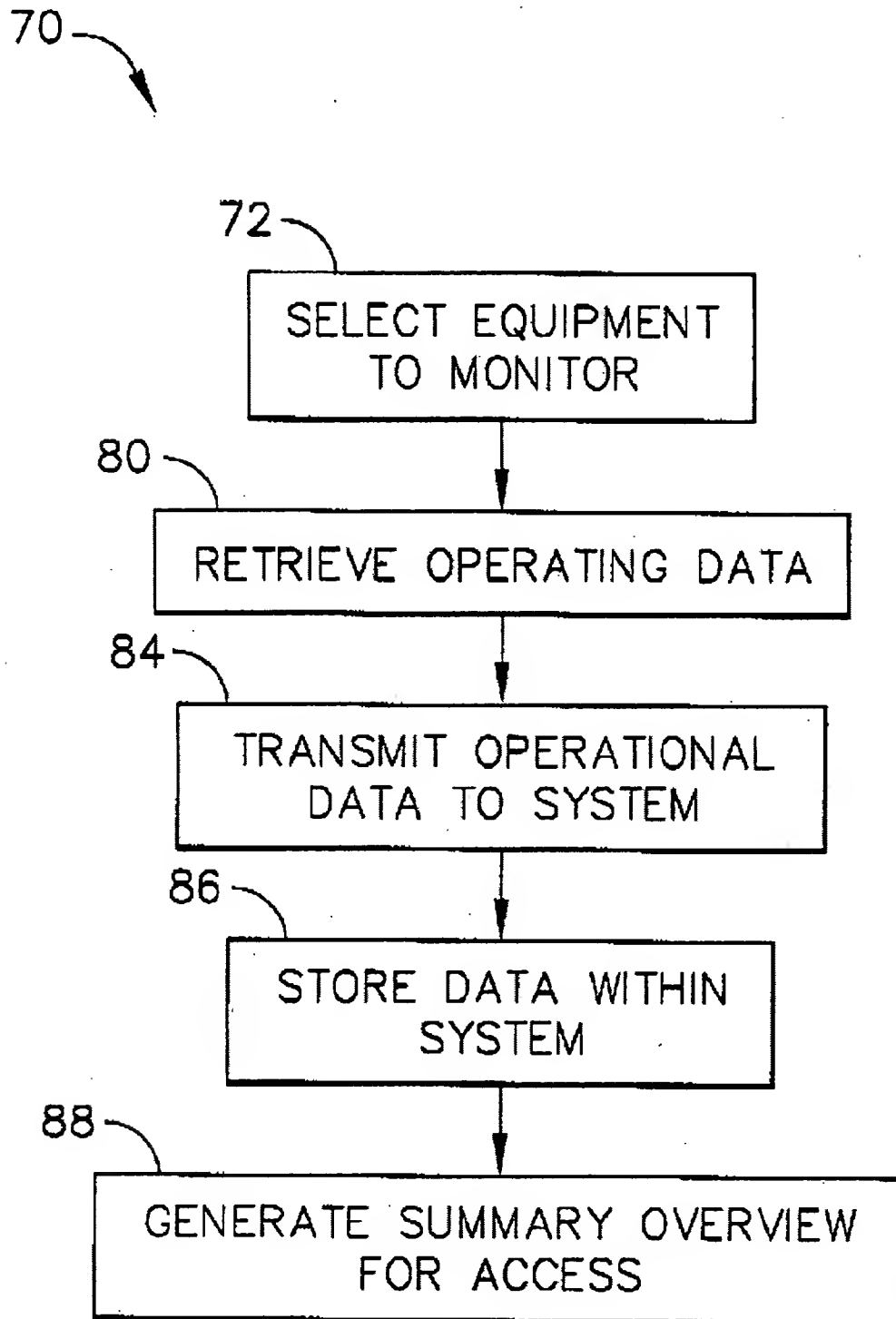


FIG. 3

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5. The most comprehensive claim appears to be independent claim 30 and will be treated accordingly in detail in the analysis that follows. The claimed means for (and steps of) inputting operation data from each of the turbines including transmitting the operating data from the turbine to a monitoring entity is seen in at least para. 0024:

FIG. 3 is a flowchart 70 illustrating an exemplary embodiment of a digitized method for monitoring operational data from a plurality of gas turbine plants (not shown). Initially, equipment to be monitored is selected 72. Such equipment may include, but is not limited to, gas turbines and/or gas turbine packages which may include generator sets, pump sets, and/or compressor sets. Monitored equipment within the plurality of gas turbine plants is equipped with a data retrieval computer (not shown) that retrieves 80 operational data from the equipment selected 72 for monitoring. More specifically, each data retrieval computer is electrically coupled to the equipment and receives signals from the equipment that are indicative of operating conditions of the equipment. For example, the data retrieval computers may receive a plurality of parameters from equipment including, but not limited to, vibrational data, operating temperatures, operating speeds, operating pressures, valve and actuator settings, fuel demand, power generation, operational setting percentages, alarms, and operating states and conditions.

6. The claimed means for (and steps of) processing the operation data, at the monitoring entity... and the claimed means for generating at least one report...over the internet is seen in at least paras. 0025 and 0027:

Each data retrieval computer transmits 84 retrieved operational data from the monitored equipment to a monitoring system, such as monitoring system 10 (shown in FIG. 1) or monitoring system 22 (shown in FIG. 2). In one embodiment, each data retrieval computer transmits retrieved operational data at periodic predetermined timed intervals. The retrieved data is stored 86 within a database server, such as database server 16 (shown in FIGS. 1 and 2), and is not accessible to on-site personnel through each data retrieval computer. Rather, the retrieved operational data is accessible 88 by internal users, as well as internal and external customers that have been assigned access to the monitoring system. More specifically, as described in more detail below, the monitoring system enables users to view archived data from the central database, as well as live on-line data.

The information contained in these user interfaces, i.e., web-pages, is exemplary only and may change from one turbine plant monitoring system to another. The information provided through the user interfaces depicted in FIGS. 4 through 7 is stored in a centralized database within centralized database 18 (shown in FIG. 1) and retrieved by server system 12 (shown in FIG. 1) as required, and as described above. Many variations of particular user interfaces viewable by the customer may be utilized. The following description refers to one set of web-pages that can be used to prompt the user to retrieve a variety of operational data for remotely monitoring a plurality of turbine plants. Of course, many variations of such web-pages are possible.

7. The difference between the instant claimed invention (claims 1, 21, 26, 27, 29 and 30, and dependent claims 2, 9-11, 15-16, 22, and 25) and that of Frantz et al. lies in the broadly claimed "processing the operation data to generate secondary operation data" or more particularly, the claimed "applying data quality standards against the operation data."

8. Keyes et al. disclose shared-use data processing for process control systems. They are particularly concerned with the remote monitoring of power generating plants, and the rotating equipment like turbines in those plants. See paras. 0003 and 0009. Keyes et al. also teach applying data quality standards against plant operation data. See at least para. 0029:

The shared-use data processing facility described herein may employ various data correction techniques to correct for sensor drift (i.e., degradation of sensor accuracy over time) and sensor failure. The redundant data servers 110-114 within the shared-use data processing facility 100 may execute applications that provide automatic digital verification, data validation, data reconciliation and periodic or event triggered automatic data source re-calibration (for sensors or other devices having this capability). Further, the data correction applications being executed by the shared-use data processing facility 100 may include failure and drift detection circuitry

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and/or logic that identifies when a sensor or device has drifted (or is about to drift) beyond its self-correction range. In response to detecting such an out-of-range condition, the failure and drift detection circuitry and/or logic may execute a bumpless measurement substitution, which sends the last known good measurement from the failing sensor or device to a redundant sensor or device, and may then generate an alarm message for the failed or failing device. Of course, more complex data correction or substitution schemes such as, for example, neural net or correlation model may be used instead. In any event, the shared-use data processing facility may then use diagnostic information pertaining to the failed sensor or device to autonomously request or to initiate needed maintenance for that failed sensor or device. In cases where a sensor does not provide automatic re-calibration capability, the shared-use data processing facility described herein may use redundant measurements, heat flow and material balances and/or process models to develop correction factors that may be applied to the measurements being read from inaccurate sensors and other devices, thereby eliminating the need to immediately remove, replace or service these devices. To facilitate the data correction capabilities of the shared-use data processing facility described herein, the various data servers used within the system such as, for example, the embedded servers 234, 235 and 242, the data concentration nodes 214 and 216 and the redundant servers 110-114, may add time stamp and data quality parameters to data that is being communicated between a plant and the shared-use data processing facility 100. (emphasis added by the examiner)

9. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the application of data quality standards against plant operation data as taught by Keyes et al., into the system and method for monitoring gas turbine plants disclosed by Frantz et al., because such a combination provides automatic digital verification, data validation, data reconciliation and periodic data source recalibration in a remote, fault-tolerant, web-based, turbine monitoring system. See at least para. 0029 of Keyes et al. (above) for this explicit motivation.

10. As per dependent claims 12-13 and 17-20, see at least Figs. 4-7 of Frantz et al.

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11. As per dependent claim 14, see at least the storage elements of Figs. 1-3 of Frantz et al. or Figs. 1-2 of Keyes et al.

Allowable Subject Matter

12. Claims 3-8, 23-24 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

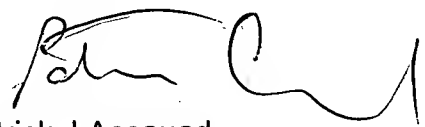
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the attached PTO-892. Most notable are: Fig. 36 of US 2002/0123864 A1; Fig. 12 of US 2002/0107868 A1; Fig. 7 of US 6,343,251 B1; and finally, all of US 2002/0107868 A1.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Assouad whose telephone number is 571-272-2210. The examiner can normally be reached on Tuesday-Friday, 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick J Assouad
Primary Examiner
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pja